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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,847	08/25/2000	Robert Mays JR.	MYS-00-02-02	6265

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EXAMINER	
LI, SHI K	

ART UNIT	PAPER NUMBER
2633	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/648,847	MAYS, ROBERT	
	Examiner	Art Unit	
	Shi K. Li	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2003 and 23 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,16 and 21-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,16 and 21-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

The proposed drawing correction filed on 23 October 2003 is approved.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 21, 23, 24, 25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13, 13, 17, 10, 11, 12, 20, 18, 19, 19, 20, 7, 7, 8, 14, respectively, of copending Application No. 09/851,856. Although the conflicting claims are not identical, they are not

patentably distinct from each other because each of the claims of Application '856 listed above includes limitations of the corresponding claim of the instant application. For example, claim 13 of Application '856 depends on claim 1 which comprises a source of energy, a detector and a filtering system. Claim 13 further specifies that the source is optical (an array of optical transmitters) and the filter system includes an array of lenses with arcuate surface and holographic transform being recorded within a volume of the array of lenses. Similarly, each of the rest of the claims of Application '856 listed above includes limitations of the corresponding claim of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 2, 16 and 22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13, 18 and 7, respectively, of copending Application No. 09/851,856 in view of admitted prior art (admission). Claim 13 of Application '856 includes the limitations of claim 1 of the instant application as discussed above. The difference between claim 13 of Application '856 and claim 2 of the instant application is that claim 13 of Application '856 does not teach that holographic transform function is used to remove unwanted wavelength. The instant application recited in page 2, lines 13-17 that holographic optical element can be used to filter optical energy based on wavelength. One of ordinary skill in the art would have been motivated to combine the teaching of admission with claim 13 of Application '856 because noise from environment is of broad wavelength range and interference from adjacent channels in WDM is of difference wavelength and, therefore, filtering based on wavelength eliminates most unwanted noise and interference. Thus it would have been

obvious to one of ordinary skill in the art at the time the invention was made to use holographic transform function to filter unwanted noise and interference based on wavelength, as taught by admission, in claim 13 of Application '856 because most noise and interference are in wavelength range outside of the signal wavelength. Similar reasoning of obviousness applies to claims 16 and 22 of the instant application.

This is a provisional obviousness-type double patenting rejection.

4. Claims 1, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 21, 22, 23, 24, 25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13, 13, 17, 10, 11, 12, 20, 18, 19, 19, 20, 1, 2, 7, 8, 14, respectively, of copending Application No. 09/851,857. Although the conflicting claims are not identical, they are not patentably distinct from each other because each of the claims of Application '856 listed above includes limitations of the corresponding claim of the instant application. For example, claim 13 of Application '857 depends on claim 1 which comprises a source of energy, a detector and a filtering system. Claim 13 further specifies that the source is optical (an array of optical transmitters) and the filter system includes an array of lenses with arcuate surface and holographic transform being recorded within a volume of the array of lenses. Similarly, each of the rest of the claims of Application '857 listed above includes limitations of the corresponding claim of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 2 and 16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 and 18, respectively, of

copending Application No. 09/851,857 in view of admitted prior art (admission). Claim 13 of Application '857 includes the limitations of claim 1 of the instant application as discussed above. The difference between claim 13 of Application '857 and claim 2 of the instant application is that claim 13 of Application '857 does not teach that holographic transform function is used to remove unwanted wavelength. The instant application recited in page 2, lines 13-17 that holographic optical element can be used to filter optical energy based on wavelength. One of ordinary skill in the art would have been motivated to combine the teaching of admission with claim 13 of Application '857 because noise from environment is of broad wavelength range and interference from adjacent channels in WDM is of difference wavelength and, therefore, filtering based on wavelength eliminates most unwanted noise and interference. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use holographic transform function to filter unwanted noise and interference based on wavelength, as taught by admission, in claim 13 of Application '857 because most noise and interference are in wavelength range outside of the signal wavelength. Similar reasoning of obviousness applies to claim 16 of the instant application.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 recites the limitation "the spherical surface" in line 13 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 21-22 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Arns et al. (U.S. Patent 6,449,066 B1).

Arns et al. discloses in FIG. 11A an optical communication system comprising a source of energy 34, a detector 44 and a volume phase transmission grating (filtering element) 10. Arns et al. teaches in col. 6, lines 12-13 to use holographic techniques for the grating.

Regarding claim 22, the phase transmission grating removes unwanted wavelength.

6. Claims 21-22 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Agranat et al. (U.S. Patent 6,542,264 B1).

Agranat et al. discloses in FIG. 5 a communication system comprising a plurality of transmitter, a plurality of receivers and switch 140. Agranat et al. teaches in FIGs. 3(a)-3(c) that the switch 140 comprises volume holographic optical elements. The holographic optical elements filter according to wavelength.

7. Claims 21 and 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Ford (U.S. Patent 6,304,694 B1).

Ford discloses in FIG. 4 a method for aligning a plurality of fibers. FIG. 4 comprises a first fiber array 50 with holographic substrate 52 on its right and a second fiber array 51 with holographic substrate 52. Ford teaches in col. 4, line 62-col. 5, line 4 that the method applies for aligning an array of light emitting elements with an array of photodetectors.

Allowable Subject Matter

8. Claims 1-10 would be allowable (except for the provisional double patenting rejection) if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

9. Claims 11-14 and 16 are allowed (except for the provisional double patenting rejection).

Response to Arguments

10. Applicant's arguments with respect to claims 21-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 703 305-4341. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

skl

M.R. SEDIGHIAN
Patent Examiner
Art Unit: 2633